

REMARKS

Entry of these additional changes prior to further examination is requested. An RCE is concurrently filed.

Applicants request the Examiner to formally make U.S. Patent No. 6,160,600 of record by returning an initialed Form PTO-892 listing this reference thereon. This reference was cited by the Examiner.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be examined. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Version with markings to show changes made

In the claims:

Claims 2, 8, 14 and 20 have been cancelled.

Claims 1, 7 13, and 19 have been amended as follows:

1. (Twice Amended) A method of driving a reflective type liquid crystal display device,

said reflective type liquid crystal display device comprising:

a first insulating substrate having transparency;

a reflecting layer;

a second insulating substrate being disposed opposite to the first insulating substrate, at least a part of said second insulating substrate covering the reflecting layer;

a first electrode being formed over the first insulating substrate;

a first conducting line for applying electrical signals to the first electrode, said first conducting line being formed over the first insulating substrate;

a first thin film transistor formed over the first insulating substrate as a switching element and electrically connected to the first electrode and the first conducting line,

said first thin film transistor comprising:  
a crystalline semiconductor island formed  
over the first insulating substrate;  
source and drain regions formed in the  
crystalline semiconductor island;  
a gate electrode formed adjacent to the  
crystalline semiconductor island having a gate insulating film  
therebetween,  
a pair of low concentration regions each  
being adjacent to the source and drain regions in the  
crystalline semiconductor island;  
an interlayer insulating film covering the first  
thin film transistor, said interlayer insulating film being a  
multilayer film of silicon oxide and silicon nitride;  
a second electrode being formed over the first  
insulating substrate, said second electrode being electrically  
insulated from the first electrode and from the first conducting  
line;  
a second conducting line for applying electrical  
signals to the second electrode, said second conducting line  
being formed on the first insulating substrate;  
a liquid crystal material being interposed  
between the first and second insulating substrates;

said method comprising the steps of:

producing a parallel electric field to the first insulating substrates, said parallel electric field being generated between the first and second electrodes, and

driving the liquid crystal material by the parallel electric field,

wherein the liquid crystal material is oriented in a hybrid alignment nematic mode.

7. (Twice Amended) A method of driving a reflective type liquid crystal display device,

said reflective type liquid crystal display device comprising:

a first insulating substrate having transparency;

a reflecting layer;

a second insulating substrate being disposed opposite to the first insulating substrate, at least a part of said second insulating substrate covering the reflecting layer;

a first electrode being formed over the first insulating substrate;

a first conducting line for applying electrical signals to the first electrode, said first conducting line being formed over the first insulating substrate;

a first thin film transistor being formed over the first insulating substrate as a switching element and electrically connected to the first electrode and the first conducting line;

said first thin film transistor comprising:

a crystalline semiconductor island formed over the first insulating substrate;

source and drain regions formed in the crystalline semiconductor island;

a gate electrode formed adjacent to the crystalline semiconductor island having a gate insulating film therebetween,

a pair of low concentration regions each being adjacent to the source and drain regions in the crystalline semiconductor island;

a second thin film transistor formed over the first insulating substrate for driving the first thin film transistor;

an interlayer insulating film covering each of the first and second thin film transistors, said interlayer insulating film being a multilayer film of silicon oxide and silicon nitride;

a second electrode being formed over the first insulating substrate and electrically insulated from the first electrode and from the first conducting line;

a second conducting line for applying electrical signals to the second electrode, said second conducting line being formed over the first insulating substrate;

a biaxial film disposed over the first insulating substrate;

a polarizing plate disposed on the biaxial film;

a liquid crystal material being interposed between the first and second insulating substrates;

said method comprising the steps of:

producing a parallel electric field to the first insulating substrates, said parallel electric field being generated between the first and second electrodes, and

driving the liquid crystal material by the parallel electric field,

wherein the liquid crystal material is oriented in a hybrid alignment nematic mode.

13. (Twice Amended) A method of driving a reflective type liquid crystal display device,

said reflective type liquid crystal display device comprising:

a first insulating substrate having transparency;  
a second insulating substrate being disposed opposite to the first insulating substrate having a reflecting layer thereon;

a first electrode being formed over the first insulating substrate;

a first conducting line for applying electrical signals to the first electrode, said first conducting line being formed over the first insulating substrate;

a first thin film transistor being formed over the first insulating substrate as a switching element and electrically connected to the first electrode and the first conducting line;

said first thin film transistor comprising:

a crystalline semiconductor island formed over the first insulating substrate;

source and drain regions formed in the crystalline semiconductor island;

a gate electrode formed adjacent to the crystalline semiconductor island having a gate insulating film therebetween,

a pair of low concentration regions each being adjacent to the source and drain regions in the crystalline semiconductor island;

a second thin film transistor being formed over the first insulating substrate for driving the first thin film transistor, said second thin film transistor including an n-channel third thin film transistor and a p-channel fourth thin film transistor being connected to each other;

an interlayer insulating film covering each of the first and second thin film transistors, said interlayer insulating film being a multilayer film of silicon oxide and silicon nitride;

a second electrode being formed over the first insulating substrate and electrically insulated from the first electrode and from the first conducting line;

a second conducting line for applying electrical signals to the second electrode, said second conducting line being formed over the first insulating substrate;

a liquid crystal material being interposed between the first and second insulating substrates;

said method comprising the steps of:

producing a parallel electric field to the first insulating substrates, said parallel electric field being generated between the first and second electrodes, and

driving the liquid crystal material by the parallel electric field,

wherein the liquid crystal material is oriented in a hybrid alignment nematic mode,

wherein the liquid crystal material has a first orientation near the first insulating substrate while the liquid crystal material has a second orientation near the second insulating substrate, said second orientation being different from the first orientation.

19. (Twice Amended) A method of driving a reflective type liquid crystal display device,

said reflective type liquid crystal display device comprising:

a first insulating substrate having transparency;

a second insulating substrate being disposed opposite to the first insulating substrate;

a reflecting layer on the second insulating substrate;

a first electrode being formed over the first insulating substrate;

a first conducting line for applying electrical signals to the first electrode, said first conducting line being formed over the first insulating substrate;

a first thin film transistor formed over the first insulating substrate as a switching element and electrically connected to the first electrode and the first conducting line;

said first thin film transistor comprising:

a crystalline semiconductor island formed over the first insulating substrate;

source and drain regions formed in the crystalline semiconductor island;

a gate electrode formed adjacent to the crystalline semiconductor island having a gate insulating film therebetween,

a pair of low concentration regions each being adjacent to the source and drain regions in the crystalline semiconductor island;

a second thin film transistor formed over the first insulating substrate for driving the first thin film transistor;

an interlayer insulating film covering each of  
the first and second thin film transistors, said interlayer  
insulating film being a multilayer film of silicon oxide and  
silicon nitride;

a second electrode being formed over the first  
insulating substrate and electrically insulated from the first  
electrode and from the first conducting line;

a second conducting line for applying electrical  
signals to the second electrode, said second conducting line  
being formed over the first insulating substrate;

a liquid crystal material being interposed  
between the first and second insulating substrates;

said method comprising the steps of:

producing a parallel electric field to the first  
insulating substrates, said parallel electric field being  
generated between the first and second electrodes, and

driving the liquid crystal material by the  
parallel electric field,

wherein the liquid crystal material is oriented in a  
hybrid alignment nematic mode,

wherein the liquid crystal material is oriented  
substantially horizontally to the first insulating substrate  
near the first insulating substrate while the liquid crystal

material is oriented substantially vertically to the second insulating substrate near the second insulating substrate.